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Appendix C Transportation Management Plans

Conceptualized Traffic Management Plan

Patronage demands at the existing Main Street ferry terminal fluctuate in magnitude and direction almost continually. During peak demand periods, capacity shortfall conditions arise, which unless effectively managed can "gridlock" traffic operations. At present, traffic control personnel manage traffic operations between the ferry pier and the upland holding area. During peak demand periods, traffic control is extended southward along SR 104 past the Pine Street intersection. As shown in Figures C-1 and C-2, both the Point Edwards and the Mid-Waterfront alternatives for the Edmonds Crossing project would significantly increase onsite staging capacity for ferry traffic. This increased storage capacity would reduce the likelihood of spillover impacts on local traffic circulation. Nevertheless, a traffic management plan (TMP) should be developed to minimize capacity overflow problems and to safely route traffic. This plan would be detailed and refined in the future to address problems as they arise with input from the general community as well as government agencies. The purpose of this discussion is, therefore, not to prescribe a specific traffic management plan, but rather to outline what a TMP for the multimodal transportation center might include.

The TMP might have the following objectives:

- Improve traffic safety
- Provide passenger information
- Minimize risks of ferry loading delays
- Minimize disruptions to local traffic
- Avoid impaired access to the multimodal facility

With respect to the last two objectives, two intersections of the new SR 104 alignment, Edmonds Way and the 216th Street SW (Town of Woodway access)/terminal access road, are of primary concern.

Normal Demand Conditions

Normal demand conditions are defined to be those where the capacity of the toll plaza and the paid staging area for ferry vehicles are sufficient to handle demand. For Kingston-bound traffic approaching the Pine Street intersection under normal non-queue overflow conditions, the first challenge would be how best to merge and channel traffic to the toll plaza. The second challenge would be how to process them through the toll plaza without blocking the Town of Woodway and terminal access road intersection.

Figure C-3 shows two different lane configurations for the SR 104/Pine Street intersection. Option 1 has been selected and incorporated into the project design. This configuration would allow vehicles leaving the ferry terminal/multimodal center to turn either northbound on Edmonds Way towards downtown Edmonds or southbound on SR 104. These vehicles would be prohibited from travelling

eastbound through the intersection on Pine Street. Equally important, vehicles travelling westbound on Pine Street would not be allowed to continue through the intersection toward the ferry terminal/multimodal center. These restrictions address the concern of many residents that Pine Street would become a preferred route to the ferry by precluding the use of Pine Street as a primary access route to the multimodal center. In addition, allowing a northbound turn from the access route onto Edmonds Way would benefit Woodway residents destined for downtown Edmonds and other points north.

The westbound departure of the new SR 104 alignment from this intersection toward the ferry dock would have three lanes, with a left-turn lane added for the approach to the 216th Street SW intersection. At the Point Edwards site, the traffic queuing distance between the Pine Street intersection and the 216th Street SW intersection would be 500 feet, and between the 216th Street SW intersection and the ferry toll plaza, it would be 750 feet. This 1,250-foot-long segment and the Kingston-bound approach of SR 104 to the Pine Street intersection are both critical elements, which would be the core focus of the TMP. For the Mid-Waterfront site, the queuing distance between the toll plaza and 216th Street SW intersection would be longer and therefore less critical.

For the Point Edwards alternative, westbound traffic on SR 104 would be sorted into three lanes approaching the Pine Street intersection. The left-most lane would be signed for the Town of Woodway and Kingston Ferry. The center lane would be signed for Kingston Ferry and rail station traffic, while the right-most lane would be signed for Edmonds Way and Pine Street traffic. Effective advance lane signage would be required to safely sort traffic into three lanes, and advance caution signs warning that a ferry toll area is ahead should be provided.

Departing the Pine Street intersection westbound on SR 104, Town of Woodway traffic would be signed to the left-turn pocket, and terminal traffic would be signed into the right-turn-only lane. Clear signage would be provided to indicate that straight-through traffic should only include ferry-bound vehicles required to pay ferry passage. Minimal problems should arise because both the right turn to the terminal and the left turn to 216th Street SW would provide escape opportunities.

The TMP for normal demand conditions could consist of basic queue monitoring, signal coordination, and traveler information systems. Queues should be monitored for Washington State Ferries (WSF) facility management purposes (toll plaza staffing) and also to provide ferry patrons with rough information on wait times. Simple closed-circuit television (CCTV) surveillance technology could monitor for accidents and queue-length from a mini traffic management control (TMC) center. Signal coordination between the Pine Street signal and the 216th Street SW signal would be required for west-bound traffic to prevent spillover problems. Signal coordination would not be as critical for eastbound traffic because most, if not all, vehicles would make free right turns onto southbound SR 104.

In order to encourage rail and bus access to the ferries as well as transfers between the two modes, it would be desirable to provide real-time information about transfer connections on-board the ferries and trains.

SMA 10
SMA 9
Salmon Management Area Boundary (SMA)
Breakwater
Overhead Loading
New Ferry Pier
Overhead Pedestrian Walkway
UNOCAL Pier (to be removed)
Port of Edmonds Marina
PUGET SOUND
Existing Overhead Pedestrian Walkway (would be relocated)
Existing Ferry Terminal (shaded portion to be removed)
Turnaround
Daylighted Section of Willow Creek (Lined Channel)
Admiral Way
Bus Stops
Terminal Building
Drop Off
Railroad Platform
Covered Pedestrian Walkway
Bus Loading Area
Railroad Ave.
Willow Creek Outlet
Emergency Tide Gate
Open Channel
Stairs and Elevator
Ferry Holding Area
Short-Term Parking
EDMONDS CITY LIMITS
WOODWAY TOWN LIMITS
Stormwater Treatment Pond
Salt Marsh
Garage Entrance (below)
2-Level Parking Garage
Employee Parking Stalls
Toll Booths/2nd Story Employee Facilities Safe Room/ Agent Accounting Room
Willow Creek
Edmonds Marsh
Terminal Access Road
Existing SR 104 (Edmonds Way)
Freshwater Wetlands
Deer Creek Hatchery
Sunset Ave. N.
2nd Ave. N.
James Street
Main Street
Bell Street
2nd Ave. S.
3rd Ave. N.
3rd Ave. S.
Alder Street
Dayton Street
Terminal Access
SR 104
Pine Street
SCALE IN FEET
(1" = 400')
0
200
400

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Figure C-1
Modified Alternative 2 (Preferred Alternative): Point Edwards Site

SMA 10
SMA 9
Salmon Management Area Boundary (SMA)
UNOCAL Pier (To be removed)
Port of Edmonds Marina
New Ferry Pier
Overhead Loading
PUGET SOUND
Existing Overhead Pedestrian Walkway (would be relocated)
Existing Ferry Terminal (shaded portion to be removed)
Overhead Pedestrian Walkway
Terminal Building
Ferry Holding Area
Secondary Waterfront Access
Admiral Way
Willow Creek Outlet
Railroad Ave. N.
Toll Booths
Railroad Platforms
Bus Loading
James Street
Drop Off
Retail
Sunset Ave.
Emergency Tide Gate
Open Channel
Stormwater Treatment Pond
New SR 104
EDMONDS CITY LIMITS
WOODWAY TOWN LIMITS
3-Level Parking Garage
2nd Ave. N.
Bell Street
James Street
2nd Ave. S.
Main Street
3rd Ave. N.
Edmonds Marsh
Willow Creek
Existing SR 104 (Edmonds Way)
3rd Ave. S.
Dayton Street
Alder Street
Walnut Street
Terminal Access
SR 104
Pine Street
Pine Street
SCALE IN FEET
(1" = 400')
0
200
400

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Figure C-2
Alternative 3: Mid-Waterfront Site

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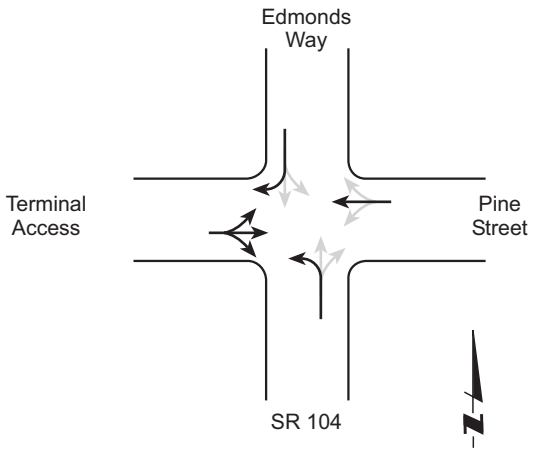
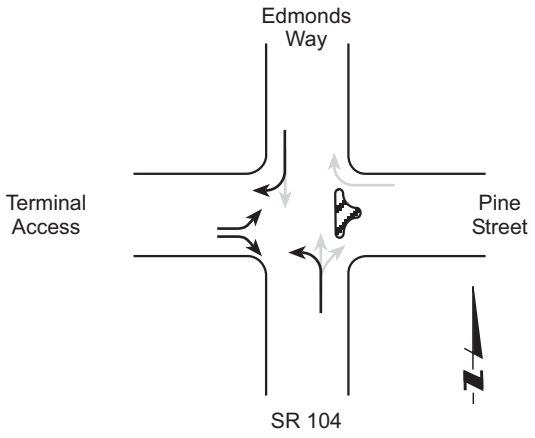
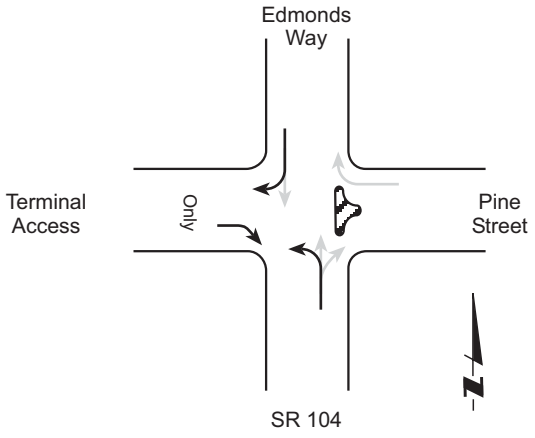


Base Option
(as the intersection currently operates)



Selected Access Option (Option 1)



Rejected Access Option (Option 2)

Legend

- Terminal Access
- Other Local Access

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Figure C-3
Access Options for Terminal Traffic: Build Alternatives

Peak Demand Conditions

Should ferry queues ever build up east of the 216th Street SW intersection, additional management efforts would be needed. During maximum demand conditions, all traffic approaching the ferry terminal would need to be channeled to the SR 104 approach.

Channeling traffic would require that changeable message signs be placed along the Edmonds Way and Pine Street approach routes. Barricades might be added to close the Edmonds Way lane and changeable message signs added on traffic islands to prohibit problem traffic movements. A traffic control officer would probably provide the most effective means of enforcing access prohibitions for Pine Street and Edmonds Way approaches. Ferry traffic on the SR 104 approach would need to queue in the two mid-street traffic lanes until space opened west of the intersection. An informational sign should be provided to advise motorists waiting in this queue when to start engines and prepare to advance through the intersection. Town of Woodway, ferry HOV traffic, and terminal traffic (all non-ferry general traffic) would be redirected to share the right-most traffic lane with Edmonds Way-bound traffic. Either a separate traffic signal phase or physical barrier management system would be required to safely manage the potential ferry and local traffic weave between Pine Street and 216th Street intersections. Speed limits on SR 104 should be reduced in the area of the ferry queue, with flashing warning signs sited along the approach to the reduced speed area. These speed reduction warning signs could be coordinated with traveler advisory instructions to tune into car radio service information.

Should these extreme demand conditions become frequent and regular conditions, reconfiguration of the westbound SR 104 approach to the Pine Street intersection should be considered. This reconfiguration would shift the ferry queue lane to the right-most traffic lane, with the intersection functioning similarly to the Dayton Street intersection.

Under severe traffic conditions, Community Transit buses could be redirected to the west side of the railroad tracks along Admiral Way for passenger pick-up. Passengers would similarly need to be redirected to this alternative pick-up stop, probably via announcements on the train and ferry.

Conceptualized Traffic Management Plan Summary

Both the Point Edwards and Mid-Waterfront alternatives would provide significant amounts of vehicle storage capacity that should help minimize local circulation problems. The most difficult challenge would be to provide simple and safe instructions to motorists bound for the ferry.

Parking Management Plan Strategy

Parking demand estimates for the Edmonds Crossing project are 400 nighttime spaces and 200 daytime spaces for ferry patrons; 150 to 300 daytime spaces for commuter rail patrons; and 25 spaces for intercity rail patrons. Another 15 to 25 parking spaces are estimated to serve WSF staff needs. These forecasts and their

underlying assumptions are described in the Transportation discipline report (CH2M HILL et al., 1995) and the Task 4 Conceptual Planning Technical Memorandum (Wilbur Smith Associates, 1994). The demand estimates are largely determined by the amount of ferry and rail patronage, the relative convenience of alternative access modes, and pricing policies for parking. Recognizing that parking is both costly to provide and is not generally considered a desired use along the waterfront except to serve waterfront recreational users, provision of onsite parking for Edmonds Crossing patron needs would be kept to a minimum. Thus a need would exist to:

- maximize efficient utilization of this parking
- maximize mutual opportunities for shared use of nearby parking resources
- manage project demands to minimize adverse parking impacts on nearby parking supplies

An illustrative parking management plan strategy is described herein to address these needs. This strategy would be detailed and refined to address problems as they arise, with input from the general community as well as government agencies. The purpose of this discussion is therefore not to prescribe a specific Parking Management Plan, but rather to outline the elements of a potential parking management plan.

The opportunities and potential parking problems differ significantly between the Point Edwards alternative and the other two alternatives.

Alternative 1 (No Action): Existing Main Street Ferry Terminal

At the existing Main Street ferry terminal, little opportunity exists to meet patron parking demands without the development of a new parking structure, perhaps as a joint development partnership with private sector development along the waterfront. Without an increased parking supply, conflicts with downtown and waterfront parking would likely worsen.

The most convenient parking is the Diamond paid parking lot. From the perspective of the project, this parking would provide maximum use by serving commuter rail patrons during the day and ferry patrons at night. Because it is a private lot whose operator will attempt to maximize revenue rather than vehicle turnover, this pattern of usage would likely be difficult to achieve. One approach would be for the commuter rail service to subsidize use of this lot by its commuters, thereby making it more revenue attractive to the private operator to support dual usage of the lot. Other options for increasing supply would include: the remotely located Aurora Park and Ride lot and financial incentives for shared use of the Antique Mall shopping center lot. The Aurora Park and Ride lot could be made more attractive if through-routed Kitsap Transit bus service could be provided during peak commute hours. For example, one or two Kitsap Transit buses might ride the ferry and continue directly to the Aurora Park and Ride lot, providing passengers with a seamless no-transfer service. A late-night shuttle connection would also be needed to cover periods not covered by Community Transit's regular service.

Additional enforcement would be required to prevent abuse of nearby downtown and waterfront parking supplies.

Alternative 2: Point Edwards Site

The project proposes to provide a surface lot for 90 spaces and a parking structure for about another 460 spaces. Thus, sufficient parking would be provided onsite to accommodate forecast demands. This would likely be paid parking. Some parkers would undoubtedly seek nearby free parking to avoid paying.

The Point Edwards site has additional land nearby that could be commercially developed. Since project parking demands peak at nighttime, it would be desirable if these lands would be developed with a use whose parking demands peak in the daytime (such as office). Some shared-use opportunities for parking resources would result. SMARTPARKS technology could be used to monitor parking usage, assist with revenue collection, assist with security surveillance, and provide approaching motorists with parking information.

The nature and extent of free-parking abusers would largely depend on the nature of the new development and policies regarding commuter rail patron parking charges. Seekers of free parking most likely would abuse parking resources in the following places:

- New joint-use area adjacent to Edmonds Crossing project
- Harbor Square
- Waterfront Port properties
- Woodway/UNOCAL hillside areas

Undesired use of parking areas at a redeveloped UNOCAL site during the daytime could be managed through employee sticker systems and periodic enforcement of short-term parking requirements for cars without stickers. Overnight parking would be relatively easy to enforce. A similar approach would probably work for Harbor Square, although hotel guests would be required to place a parking permit on their windshields. Obviously these management tactics would not be implemented unless parking abuse problems arise. The Port already has restrictions on parking along the waterfront. Some additional enforcement would probably be required. A residential parking permit program or something similar might be required for the UNOCAL and Town of Woodway hillside residential areas.

Alternative 3: Mid-Waterfront Site

The design for the Mid-Waterfront site provides a three-level 490-space parking garage to serve the multimodal transportation center and the 49,000-square-foot retail element of the project. Some opportunities for shared parking in this garage might exist. In order to compete with other businesses in downtown and along the waterfront, retail parking would probably be free, although this has yet to be determined. The needs of the retail businesses and the transportation center would be balanced either through pricing policy or use restrictions. SMARTPARKS tools could be employed to achieve this balance and to direct respective users to their spaces.

Preferred Alternative Conceptual Bus Service Plan

The Point Edwards location is currently unserved by bus service. With the relocation of the ferry and rail stations, it is anticipated that local bus service would also be modified. The nature of the bus re-routing, however, has not yet been defined. These route modifications would be defined as part of the Community Transit's continuing planning process, which provides ample opportunity for public input and comment. The purpose of this discussion is to outline how services might change rather than to prescribe a final plan.

Community Transit is envisioned as the sole local transit service operating at the Edmonds Crossing project, with King County Metro passenger transfer points located at Aurora Village and along I-5 and Everett Transit passenger transfer points located north of Edmonds.

Local Service

Community Transit currently operates three local service routes to the waterfront area of Edmonds. In the near term, the present routes serving Edmonds would probably be diverted or extended to the Point Edwards site. Local route 110 might, for example, bend southward onto Admiral Way from its Dayton Street approach to the waterfront rather than looping north to Main Street. It could then continue south along the westside of the tracks. Local route 180 might bend west onto Main Street from Third Avenue and then south onto Railroad Avenue before continuing south on Admiral Way. Local route 630 is now through-routed in Edmonds and therefore has two approach legs. The Main Street leg connecting to Lynnwood might also bend south onto Admiral Way from Dayton Street rather than looping north to Main Street. Then the SR 104 leg connecting to Mountlake Terrace might be diverted north to Main Street and thence to Admiral Way via Railroad Avenue. This strategy would maintain service to the foot of Main Street and to the South County Senior Center. Alternatively, all three local routes could be routed past the senior center. Because the three local routes would likely be schedule-coordinated with the commuter rail service, all three routes along the same path would result in duplicative service (four buses running nose to tail in a bunch). Key factors in determining which route(s) to operate past the senior center would include connectivity to downtown Edmonds and efficient bus-scheduling cycle times.

Local service in the future might also include a downtown shuttle or circulator to cover late-night hours after regular Community Transit service terminates and also perhaps before regular service begins. This local shuttle could also be slotted in between the 30-minute commuter rail and bus, providing more convenient 15-minute combined headway service. Additional funds would be required to expand and provide this service.

Another possible service expansion might include new coverage to residential areas along 100th Avenue south of Walnut Avenue. This area is a prime marketshed for the commuter rail service and is currently unserved. Some transit systems deploy their small paratransit vehicles for early morning and later evening feeder service to commuter rail systems. This concept might also be effective for Community Transit.

Commuter Service

Community Transit operates three commuter routes to the waterfront area. It is understood that these commuter bus routes would continue running even after commuter rail service begins operations. They would operate to/from the new multimodal center from the east side of the tracks. Route 404 approaches the waterfront on Bowdin and Dayton Streets and loops north to Main Street on Railroad Avenue and Edmonds Way. This routing might be extended to the Point Edwards site simply by replacing this loop with an extension southward along Edmonds Way. The same is true for Route 147, which operates to Boeing. Route 870/875 also approaches the waterfront on Dayton Street and might be rerouted via Edmonds Way to the new multimodal center. These commuter routes would likely be linked more to ferry schedules than to commuter train schedules.

Locating the local buses and the commuter buses on opposite sides of the railroad tracks likely would not be much of a problem for bus-to-bus transferring passengers. Most bus passengers would be transferring to either a ferry or a train. Some transfers might occur between local buses, but few local bus to commuter bus transfers would occur due to the local area routings.

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